

**Amendments to the Drawings:**

The attached annotated sheet of drawings (1/5) shows changes to FIG. 1, including the addition of reference numerals “126” and “128” and associated lead lines to numerically identify preamp circuitry and flex on suspension (FOS) conductors shown therein. Also attached is a replacement sheet (1/5) that reflects the proposed corrections to FIG. 1.

Attachment: Replacement Sheet  
Annotated Sheet

### **Remarks**

This is in response to the first Office Action mailed April 22, 2005, which objected to the drawings and rejected pending claims 1-24.

The Applicant has hereinabove presented certain amendments to the drawings and the specification. These amendments correct minor errors of a typographical nature as well as add additional reference numerals to the drawings. No new matter has been added.

### **Objections to the Drawings**

The drawings were objected to on the basis that reference numeral "74" in the specification at page 7, line 14 did not appear in the drawings. This was an inadvertent error on the part of the Applicant; this should have read "174," as now corrected by the amendments above to the specification.

Another objection to the drawings was based on FIG. 1 not including reference numeral 128 for the disclosed "flex on suspension (FOS)" discussed e.g., in the specification at page 5, line 5. The Applicant has accordingly amended FIG. 1 to add reference numerals for the FOS 128, as well as for the preamp 126 of FIGS. 2 and 5.

Another objection to the drawings was based on the disclosed "demagnetization current generator" 168 being labeled as a "decay current" generator in FIG. 5. The Applicant has accordingly amended the specification to explicitly state that the "demagnetization current generator 168" is also referred to as a "decay current generator."

Additional amendments were made to the specification to correct other inadvertent errors in the application as originally filed. The Applicant's Attorney apologizes for the inconvenience caused the Examiner as a result of these errors, and requests reconsideration

and withdrawal of the objection to the drawings in view of the foregoing amendments.

**Rejection of Claims Under 35 U.S.C. §102(b)**

The first Office Action rejected apparatus claims 13-16 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,038,093 issued to Takada et al. (“Takada ‘093”). It also appears that some or all of method claims 1-12 were rejected under §102(b) as being anticipated by Takada ‘093 (see first Office Action, page 5, lines 14-16). These rejections are respectfully traversed.

Takada ‘093 is silent with regard to disclosing “a *sense circuit* which senses a residual magnetization *of a pole* of a data transducer established by application of a data transmission current to transmit data” as generally featured by independent apparatus claim 13.

In support of the rejection, the Office Action refers to col. 2, line 42 to col. 3, line 40 and col. 5, lines 32-44 of Takada ‘093 as disclosing the recited “sense circuit.” However, the Applicant respectfully disagrees that these sections, or anything else in Takada ‘093, discloses the recited “sense circuit.”

Col. 2, line 42 to col. 3, line 40 of Takada ‘093 appears to discuss a conventional magneto-resistive (MR) head construction. Nothing therein would be reasonably viewed as a “sense circuit” that “senses residual magnetization of a pole” of the head as claimed.

Col. 5, lines 32-44 of Takada appears to summarize the inventive subject matter and recites “a composite thin-film magnetic head” with various elements, including separate recording and reproducing head elements, a flux guide and a demagnetizing coil. However, the Applicant also finds nothing therein that would be reasonably viewed as the recited

“sense circuit” that “senses residual magnetization of a pole” as claimed.

Takada ‘093 applies a stabilizing current to stabilize a magnetic state of the head, and this stabilizing current may also operate to demagnetize the head (see e.g., Takada ‘093, Abstract, lines 9-15); however, Takada ‘093 applies this current globally as a preventative step and does not provide a sense circuit as claimed to detect residual magnetization of the pole (see e.g., col. 10, lines 58-62).

Takada ‘093 is thus further silent with regard to disclosing “a *demagnetizing current generator* coupled to the sense circuit which removes said residual magnetization by supplying the transducer with a demagnetizing current *selected in relation to the sensed residual magnetization*,” as further featured by claim 13. Instead, Takada ‘093 merely selects the stabilizing current to have a polarity that is opposite the polarity of the most recent write current. See e.g., col. 10, lines 40-42.

By affirmatively sensing the residual magnetization of the pole and demagnetizing the pole with current selected in relation to the sensed residual magnetization, claim 13 provides a patentably distinct improvement over Takada ‘093 and the other art of record (see e.g., the exemplary flow of FIG. 7 of the present application). Reconsideration and withdrawal of the rejection under §102(b) of claims 13-16, and claims 1-12, are thus respectfully requested.

### **Rejection of Claims Under 35 U.S.C. §103(a)**

The first Office Action rejected claims 17-19 under 35 U.S.C. §103(a) as being obvious over Takada '093 in view of U.S. Patent No. 4,970,621 issued to Gailbreath et al. ("Gailbreath '621). It appears that some or all of method claims 1-12 were also rejected under §103(a) as being obvious over Takada '093 in view of Gailbreath '621 (first Office Action, page 5, lines 14-16).

Claims 20-21 were rejected as being obvious over Takada '093 in view of U.S. Patent No. 6,388,413 issued to Ng et al. ("Ng '413"). Claim 22 was rejected as being obvious over Takada '093 in view of U.S. Patent No. 6,693,756 issued to Teo et al. ("Teo '756"). Claim 23 was rejected as being obvious over Takada '093 in view of Teo '756, further in view of U.S. Patent No. 6,671,117 issued to Dimitrov et al. ("Dimitrov '117"). The basis for the rejection of claim 24 is not clear, but it is presumed that claim 24 stands rejected as being anticipated/rendered obvious in view of Takada '093 and the other cited references above.

These rejections are respectfully traversed, and will be taken in turn.

With regard to claims 17-19, Gailbreath '621 adds nothing of significance to address the deficiencies of Takada '093. Like Takada '093, Gailbreath '621 recognizes the problem of residual magnetization, but fails to teach or suggest the claimed subject matter including a "sense circuit" that "senses residual magnetization of a pole" and a "demagnetizing current generator" which removes said residual magnetization by supplying the transducer with a demagnetizing current "selected in relation to the sensed residual magnetization."

With regard to claims 20-21, Ng '413 adds nothing of significance to address the

deficiencies of Takada '093. It is unreasonable to conclude that application of a class of seek currents applied to a voice coil motor to move an actuator, as taught by Ng '413, would be in any way suggestive of the claimed subject matter.

With regard to claim 22, Teo '756 adds nothing of significance to address the deficiencies of Takada '093. The disclosure of a preamplifier driver circuit in Teo '756 *per se* does nothing to motivate one skilled in the art to arrive at a preamplifier driver circuit with a sense circuit and demagnetization circuit embodied therein, as generally featured by claim 22.

With regard to claim 23, the use of perpendicular recording as taught by Dimitrov '117 adds nothing to make up for the deficiencies of Takada '093 and Teo '756 with regard to the claimed subject matter.

With regard to independent apparatus claim 24 directed to a preamplifier driver circuit, the Applicant notes that this claim is written in accordance with 35 U.S.C. §112, sixth paragraph. The recited “first means” and “second means” are accordingly construed as the corresponding structure disclosed in the specification that carries out the associated recited functions and equivalents thereof. See 35 U.S.C. §112, sixth paragraph; *In re Donaldson Co. Inc.*, 29 USPQ2d 1845 (Fed. Cir. 1994)(*en banc*); MPEP §2181 et. seq.; *Supplemental Examination Guidelines for Determining the Applicability of 35 U.S.C. Section 112 Para. 6*, 65 Federal Register 38510 (June 2000)(administrative procedures promulgated by the Director in accordance with the APA).

The Applicant discloses the corresponding structure for the “first means” element at least at page 11, lines 4-6, as the disclosed residual magnetization sense circuit 170 of FIG. 4. The Applicant discloses the corresponding structure for the “second means” at page 11,

lines 6-9 as the disclosed residual magnetization sense circuit 168 which operates independently or in conjunction with control inputs from servo circuit 130.

The PTO is thus obliged *as a matter of law* to utilize this construction for these respective “means” elements. See *Donaldson, Supra; B. Braun Medical v. Abbott Lab.*, 43 USPQ2d 1896, 1900 (Fed. Cir. 1997)(structure disclosed in the specification is ‘corresponding’ structure if the specification or prosecution history *clearly links or associates that structure* to the function recited in the claim.)

Accordingly, when the “first means” and “second means” elements of claim 24 are properly construed, from the foregoing discussion it can be readily seen that Takada ‘093, alone or in combination with the remaining art of record, fails to disclose, teach or suggest the claimed invention as featured by independent claim 24.

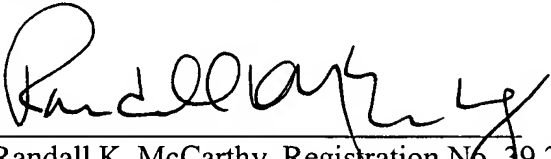
The Applicant submits that there is nothing to motivate one skilled in the art to arrive at the subject matter of claims 1-12, 17-24 from the art of record, alone or in combination. The Applicant therefore respectfully requests reconsideration and withdrawal of the rejection of claims 1-12, 17-24 under §103(a).

### **Conclusion**

The Applicant respectfully requests reconsideration and allowance of all of the claims 1-24 pending in the application. This Response is intended to be a complete response to the Office Action mailed April 22, 2005.

Should any questions arise concerning this response, the Examiner is invited to contact the below signed Attorney.

Respectfully submitted,

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